PROBLEMS

GROUP 1. STRAIGHT LINES

2.1.1. An exercise for the T square, triangle, and scale. Through the center of the space draw a horizontal and a vertical line. Measuring on these lines as diameters, lay off a 4-in. square. Along the lower side and upper half of the left side measure ½-in. spaces with the scale. Draw all horizontal lines with the T square and all vertical lines with the T square and triangle.

2.1.2. An interlacement. For T square, triangle, and dividers. Draw a 4-in. square. Divide the left side and lower side into seven equal parts with dividers. Draw horizontal and vertical lines across the square through these points. Erase the parts not needed.

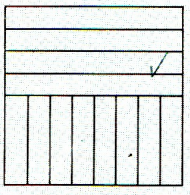
2.1.3. A street-paving intersection. For 45° triangle and scale. An exercise in starting and stopping short lines. Draw a 4-in. square. Draw its diagonals with 45° triangle. With the scale, lay off ½-in. spaces along the diagonals from their intersection. With 45° triangle, complete the figure, finishing one quarter at a time.

2.1.4. A square pattern. For 45° triangle, dividers, and scale. Draw a 4-in. square and divide its sides into three equal parts with dividers. With 45° triangle, draw diagonal lines connecting these points. Measure ⅜ in. on each side of these lines, and finish the pattern as shown.

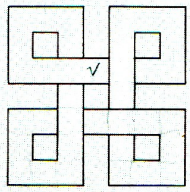
2.1.5. An acoustic pattern. For 45° triangle, T square, and scale. Draw two intersecting 45° diagonals 4 in. long, to form a field. With the scale lay off ½-in. spaces from their intersection. Add the narrow border 3/16 in. wide. Add a second border ½ in. wide. The length of the border blocks is projected from the corners of the field blocks.

2.1.6. Five cards. Visible and hidden lines. Five cards 1¾ by 3 in. are arranged with the bottom card in the center, the other four overlapping each other and placed so that their outside edges form a 4-in. square. Hidden lines indicate edges covered.

2.1.7. A Maltese cross. For T square, spacers, and 45° and 30-60° triangles. Draw a 4-in. square and a 1⅜-in. square. From the corners of the inner square, draw lines to the outer square at 15° and 75°, with the two triangles in combination. Mark points with spacers ¼ in. inside each line of this outside cross, and complete the figure with triangles in combination.



PROB. 2.1.1.



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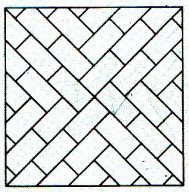

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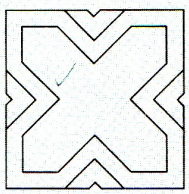

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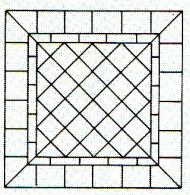

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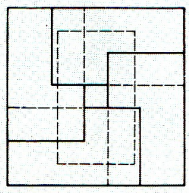

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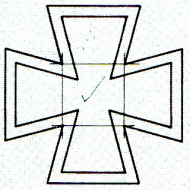

PROB. 2.1.7.